

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Amended Petition of Entergy Nuclear Vermont Yankee, LLC and)
Entergy Nuclear Operations, Inc. for amendment of their Certificate)
of Public Good and other approvals required under 30 V.S.A.) Docket No. 7862
§ 231(a) for authority to continue after March 21, 2012, operation)
of the Vermont Yankee Nuclear Power Station, including the)
storage of spent nuclear fuel)

DIRECT TESTIMONY OF DANIEL GARSON
ON BEHALF OF THE
VERMONT DEPARTMENT OF PUBLIC SERVICE

October 22, 2012

Summary: Mr. Garson's testimony addresses the impacts of operation of the Vermont Yankee Nuclear Power Station (the "VY Station") for an additional twenty years beyond its license term on the visual and scenic quality, land use, recreational, and natural resources in and around the site of the VY Station and discusses whether such extended operation would be consistent with the orderly development of the region in alignment with the criteria established in 30 V.S.A § 231, 248(a), 248(b)(1), and 248(b)(5). His testimony also includes his analysis of the prefiled testimony of Harry L. Dodson relating to these issues, and addresses potential reuse of the site and redevelopment of the surrounding area.

Mr. Garson sponsors the following exhibits:

Exhibit PSD-DG-1	Resume of Mr. Garson
Exhibit PSD-DG-2	View of typical rural, low density residential clusters of homes and open fields along Rt. 142 in immediate vicinity of the VY Station (along Rt. 142)
Exhibit PSD-DG-3	View of typical working farm and open fields along Rt. 142 in immediate vicinity of the VY Station
Exhibit PSD-DG-4	View of typical single-family residence and open fields along Rt. 142 in immediate vicinity of the VY Station
Exhibit PSD-DG-5	View of VY Station from Fort Hunt Rail Trail recreational pathway in Hinsdale, NH
Exhibit PSD-DG-6	Natural Resources Map of Town of Vernon, VT, (dated July 2012, from March 2012 draft Vernon Town Plan)

1 Q1. Please state your name and occupation.

2 A1. My name is Daniel Garson. I am a principal at Woodard & Curran, Inc., environmental
3 engineers, scientists, and planners.
4

5 Q2. Describe your education and employment background.

6 A2. I received a Master's Degree in City and Regional Planning in 1973 and a Master's
7 Degree in Landscape Architecture in 1974 from the Harvard University Graduate School
8 of Design. Following my graduate studies, I worked in the Massachusetts Office of State
9 Planning where I prepared state-wide planning and resource management studies and
10 reports. I then worked in the private sector at environmental, planning, and engineering
11 firms. I have been at Woodard & Curran since 1989 and direct the firm's work in
12 Environmental Studies, Permitting, and Resource Management. My resume is attached
13 as Exhibit PSD-DG-1.
14

15 Q3. Please describe your experience in the area of land use and visual impact analysis.

16 A3. My clients include municipalities, federal agencies, industry, colleges and universities,
17 and real estate developers. Representative projects I have performed and directed include
18 preparing the land use, visual and socioeconomic impact analyses for two nuclear and
19 two fossil fueled power plants seeking approval under state permitting and federal
20 licensing rules in New York State. These power plant siting studies and licensing
21 applications were for facilities located along the Hudson River in Columbia County, NY,
22 on Staten Island, and in Oswego, NY along the shoreline of Lake Ontario. I also served

1 as an expert witness at joint licensing hearings before the New York State Department of
2 Environmental Conservation and federal Nuclear Regulatory Commission for approval of
3 these facilities. I recently prepared an impact analysis of land use, visual and scenic
4 quality, recreational, historic and archaeological resources for permitting a liquefied
5 natural gas (“LNG”) terminal and pipeline on a riverfront site in Maine. This was for
6 state permitting under Maine Department of Environmental Protection regulations and
7 federal licensing by the Federal Energy Regulatory Commission and involved impact
8 analysis and preparation of photo-simulations showing “before” and “after” depictions of
9 views of the facility site from surrounding sensitive receptor locations, including views
10 from the river and riverfront land uses, recreational areas, historic sites, national parks,
11 roadways and nearby towns. Another similar project was the impact assessment of a
12 LNG terminal and pipeline proposed at a site in Long Island Sound involving assessment
13 of visual and scenic quality, land use, and community infrastructure. Another recent
14 project was preparation of an impact assessment under Vermont Act 250 for a paper mill
15 expansion at a site along the Missisquoi River in Sheldon, VT. This study assessed the
16 impacts on wetlands and natural resources, surface waters and water quality, shoreline,
17 community infrastructure, and visual and scenic quality in accordance with Act 250’s
18 “Ten Criteria” specified in Subchapter 4 of the Act.

19
20 Q4. What is the purpose of your testimony?

21 A4. I was retained by the Vermont Department of Public Service to assess the impacts of
22 operation of the Vermont Yankee Nuclear Power Station (the “VY Station”) for twenty

1 years beyond its original license term on the visual and scenic resources, land use,
2 recreational resources, and future development patterns of the VY Station site and
3 surrounding area to assess whether such extended operation would be consistent with the
4 orderly development of the region. To this end, I visited the Vernon area on October 15
5 and 16, 2012 to view the VY Station and its setting and surroundings. During this time, I
6 also met with planners at the Windham Regional Commission (“WRC”) to collect
7 information on the planning activities in the area and planning for the Town of Vernon.

8
9 Q5. Please describe the documents you reviewed in performing your analysis.

10 A5. I reviewed the testimony offered on behalf of Entergy Nuclear Vermont Yankee, LLC and
11 Entergy Nuclear Operations, Inc. (“Entergy”) by Harry L. Dodson, as well as the Visual
12 Analysis of the Vermont Yankee Station prepared in February 2003, introduced in this
13 proceeding as Exhibit EN-HLD-3.

14 I also reviewed the most recent Vernon Town Plan (2009), excerpts of which
15 were introduced into this proceeding as Exhibit EN-HLD-6, and discussed the draft
16 updated Vernon Town Plan (March 2012) with planners at the WRC who are assisting
17 the Town of Vernon by preparing this update to the 2009 Vernon Town Plan, as well as
18 providing planning guidance on future development in Vernon. The updated Vernon
19 Town Plan was discussed by the Vernon Planning Commission with representatives of
20 the WRC and in public meetings of the Planning Commission over the past several
21 months. I also reviewed a study entitled “Resiliency Action Plan for the Town of Vernon
22 in Preparation for the Eventual Closure of the Vermont Yankee Nuclear Power Station”

1 (Draft, June 22, 2012) prepared by the WRC for the Town of Vernon under a grant from
2 the Vermont Department of Economic, Housing and Community Development to analyze
3 local planning and land use issues of concern to the community associated with the
4 closure of the VY Station.

5 In addition, I reviewed the Windham Regional Plan (2006) prepared by the WRC
6 and the Town of Hinsdale, New Hampshire Master Plan (2003), excerpts of which were
7 introduced into this proceeding as Exhibits EN-HLD-7 and EN-HLD-8, respectively.

8 I reviewed the Connecticut River Scenic Byway Study (1997-1998) prepared by the
9 Connecticut River Joint Commission working with the Regional Planning Commissions
10 along the Connecticut River in Vermont and New Hampshire. This study was designed
11 to identify scenic byways, or state roads, that border the Connecticut River and pass
12 through scenic areas that reflect the “authentic New England experience – historic
13 villages, mountain views, working farms, home grown crops and crafts, and outdoor
14 pastimes like fishing, boating, wildlife observation, and hiking.”¹ The section of State
15 Route 142 in Vernon was designated as part of the Connecticut River Scenic Byway in
16 1998 by the Vermont Scenery Preservation Council, and in 2005 the Connecticut River
17 Scenic Byway became a National Byway.

18
19 Q6. Did you review any materials related to state or local initiatives intended to preserve and
20 enhance the rural character of communities?

¹ Connecticut River Byway Council, “Community Guide to the CT River Byway Study” (Oct. 2004),
available at <http://www.crjc.org/pdf/Nat%20scenic%20byway.pdf>.

1 A6. Yes, I reviewed a statement of the goals, guidelines, and planning framework of the
2 Community Revitalization Program sponsored by the Vermont Agency of Commerce and
3 Community Development (Department of Economic, Housing & Community
4 Development) which endeavors to preserve and enhance the rural character of
5 communities while encouraging appropriate new development in “Village Centers” in
6 small towns, such as Vernon.

7 The Village Center concept described in the Agency’s Community Revitalization
8 plans refers to a compact mixed-use residential, commercial, and small-scale industrial
9 center where appropriate development is encouraged by the State. A Village Center
10 designation is intended to maintain the rural and agricultural character of towns by
11 avoiding sprawling development and unsuitable land uses. The development principles
12 for a “Village Center” include encouraging mixed-use development such as small
13 commercial businesses, small-scale industries, low-density housing, and recreational
14 uses, in a Village Center, thereby avoiding development sprawl and maintaining the
15 natural and scenic character of the surrounding area.

16 The Village Center concept is further described in the Economic Development
17 section of the Windham Regional Plan. The Windham Regional Plan encourages
18 development, redevelopment, and infill land uses in such Village Centers as a means to
19 avoid the negative effects of development sprawl and unsuitable land use that are not in
20 keeping with the character of such Villages. A key objective of the Village Center
21 concept, according to the Windham Regional Plan, is to recognize Village Centers as one
22 of the “growth areas for the future. These same villages and downtowns are places to

1 promote redevelopment and encourage additional residential and commercial
2 development.” The Windham Regional Plan goes on to say that “[d]evelopment in
3 downtowns and villages should be carefully planned to minimize undesirable impacts on
4 the character of these places.”

5
6 Q7. Is there a “Village Center” proposed for Vernon?

7 A7. Yes. According to a map titled “Future Land Use Plan for the Town of Vernon” (January
8 2012) prepared by the WRC for inclusion in the updated Vernon Town Plan, the
9 designation of a potential Village Center development area in Vernon includes the section
10 of Route 142 between the present Town offices, library, police department, elementary
11 school, and fire station. The VY Station site is adjacent to this proposed new Village
12 Center development area. The Windham Regional Plan identifies Vernon as one of the
13 region’s towns where a Village Center development plan has been designated.

14
15 Q8. How does the VY Station impact the proposed “Village Center” development plan for
16 Vernon?

17 A8. The 2009 and draft 2012 Vernon Town Plans (together, the “Vernon Plan”) specifies in
18 the “Statement of Objectives” the key governing principles that will guide Vernon
19 officials in planning for new development and evaluating proposals for housing, open
20 space, recreation, commercial, and industrial development under a Village Center
21 development plan. In my opinion, many of these planning and development objectives
22 relate directly to the issue of whether the VY Station is a suitable land use within the

1 proposed Village Center development. These objectives are as follows (original
2 numbering retained from the Vernon Plan):

3 2. To provide for a variety of land uses that will not detract from the rural,
4 residential, scenic and agricultural character of the Town.

5 6. To discourage incompatible and uncoordinated development activity that will
6 jeopardize public and private investments.

7 7. To encourage the continued use of land for agriculture and forestry in order to
8 keep these areas of non-renewable resources available and to help meet existing and
9 future needs for food, forage and fiber, to preserve the rural character of the Town, and
10 to provide for diverse economic opportunities in farming and forestry.

11 8. To protect the rural character of the Town through careful management and
12 guidance of new development.

13 9. To provide for the conservation of the Town's natural resources and the
14 protection of sensitive areas in order to ensure continued availability of a sound
15 resource base for the enjoyment and well-being of all Vernon residents and future
16 generations.

17 11. To encourage the development of those industrial and commercial activities
18 that is in keeping with the Town's rural character.

19 Based on these objectives, the VY Station is not compatible with a Village Center
20 development because of its size, scale, and heavy industry characteristics, as explained in
21 more detail below.
22

1 Q9. Please describe other key development principles enumerated in the municipal and
2 regional plans you reviewed.

3 A9. The Vernon Plan also addresses economic growth, and states that Vernon's economic base
4 is closely tied to its agricultural and forestry resources (with five commercial farms and
5 several lumber operations in Town), as well as home-based businesses and health and
6 elderly care facilities. The Vernon Plan goes on to state that "[e]conomic development in
7 Vernon . . . must be balanced and consistent with the Town's overall objectives.
8 Examples of the types of resources and economic development desired in Vernon are
9 agriculture; forestry; industrial and commercial service facilities." The Vernon Plan also
10 notes the "critical importance of micro-businesses (i.e. firms with fewer than twenty
11 employees) in these types of economic sectors in generating new employment
12 opportunities, particularly in small rural communities."

13
14 Q10. What is your conclusion based on your review of relevant municipal and regional plans?

15 A10. While I understand that the Town of Vernon sees positive aspects associated with plant
16 operation, based on the factors and objectives of the Vernon Plan, the Windham Regional
17 Plan, and the Vermont Agency of Commerce & Community Development "Community
18 Revitalization" program, it is my professional opinion that operation of the VY Station
19 for twenty years beyond its original license term is incompatible with the desired land use
20 character and development pattern of the proposed Village Center development area in
21 Vernon. Due to this incompatibility, the extended operation of the VY Station would
22 negatively impact the ability of the Town of Vernon and private developers to attract the

1 types of businesses, including commercial and industrial uses of a suitable smaller scale
2 along with farming, housing, and service sector businesses, to the proposed Vernon
3 Village Center.

4 Additionally, the VY Station's industrial scale and character would not be
5 consistent with and would adversely impact the implementation of a Village Center
6 development from an aesthetic viewpoint. Exhibits PSD-DG-2, PSD-DG-3, and PSD-
7 DG-4 are photographs showing the present rural character of land uses along Route 142
8 in the immediate vicinity of the VY Station. These existing land uses are located in what
9 would become the Vernon Village Center and include clusters of low-density residential
10 homesteads, a working organic farm and fields, and a single-family residence surrounded
11 by fenced open fields. These are typical examples of the rural character and cultural
12 setting of the Town of Vernon and reflect the type of development that is encouraged by
13 the Town's development objectives and Village Center concept as enumerated by the
14 Windham Regional Plan and state Community Revitalization program. The large-scale
15 industrial nature of the VY Station is incompatible with these concepts.

16 Therefore, it is my opinion that operation of the VY Station for twenty years
17 beyond its original license term would interfere with the orderly development of the
18 region in light of the recommendations the relevant municipal and regional planning
19 commissions.

20
21 Q11. Please describe how your findings and conclusions differ from those of Mr. Dodson.

1 A11. Mr. Dodson relies on the fact that the VY Station has operated for forty years as
2 justification for its continued operation and does not take into account the changes that
3 have occurred since the VY Station was constructed. The world around the VY Station
4 has not simply stood still over the past forty years. Changes include establishment of and
5 public interest in more recreational and shoreline resources and heightened emphasis by
6 Town, regional, and state planners on preserving and enhancing the scenic quality,
7 agricultural uses, and rural land use patterns and businesses desired for small rural
8 communities like Vernon. The specified planning and development objectives of the
9 Vernon Plan, the Windham Regional Plan, and the Village Center designation proposed
10 for Vernon described earlier in my testimony highlight the land use and development
11 standards and principles that the VY Station does not meet today and will not meet in the
12 future, if allowed to operate twenty more years.

13
14 Q12. Do your findings and conclusions differ in any other ways from those of Mr. Dodson?

15 A12. Yes. Mr. Dodson reiterates numerous times in his testimony his conclusion that operation
16 of the VY Station for an additional twenty years would not have an adverse or undue
17 impact on the scenic or natural beauty of the area, on land use, or on aesthetics. The chief
18 rationale presented by Mr. Dodson for this conclusion appears to be that the VY Station is
19 an existing industrial facility that has operated in its present location with the same visual
20 footprint and operating conditions since it was constructed forty years ago; hence, he
21 concludes that continuing the VY Station's operation would have no adverse impact on

1 the scenic quality of the site and surrounding area's natural resources and land uses.² I
2 disagree with this conclusion for two primary reasons.

3
4 Q13. What is the first reason you disagree with Mr. Dodson's conclusion that operation of the
5 VY Station for twenty years beyond its original license term would not have an adverse
6 or undue impact on the scenic or natural beauty of the area, on land use, or on aesthetics?

7 A13. Extending operation of the VY Station would perpetuate its out-of-scale aesthetics and
8 unsuitable land use character in the present rural/agricultural/shoreline setting for an
9 additional twenty years. Based on my analysis and site visit, the VY Station is a large-
10 scale industrial complex made up of large structures with strong geometric shapes and
11 building material textures that are not in keeping with its site and surroundings. This is
12 inconsistent with the low-density development patterns of the Town of Vernon, which is
13 characterized by predominantly rural, agricultural, and low density residential land uses,
14 as discussed previously in my testimony. It is also out of scale with the surrounding
15 natural vegetation and scenic quality of the river shoreline, particularly if there were
16 additional recreational facilities added along the river in the future, such as a boat launch
17 and park areas that I describe later in my testimony, as part of the Village Center
18 development plan. Increased boating, canoeing, and kayaking on the Connecticut River
19 with the addition of public boat launches would bring more people onto the river in this
20 area resulting in greater visual impacts from the VY Station.

² Prefiled Testimony of Harry A. Dodson at A7; A8; A11; A17; A21; A22; A24; A25; and A27.

1 The existence of the VY Station along a scenic section of Route 142 and the
2 Connecticut River shoreline was likely a strong visual factor in the analysis done for the
3 Connecticut River Scenic Byways Study that I noted previously. That study classified
4 the section of Route 142 near the VY Station as “average” for its scenic quality rather
5 than “noteworthy,” as were the same roadway sections on either side of the VY Station.

6
7 Q14. Have there been changes to the area surrounding the VY Station since its construction
8 that impact your conclusion that extended operation of the VY Station would adversely
9 affect land use and/or aesthetics?

10 A14. Yes. An example of the VY Station being out of scale with its river shoreline setting and
11 the current uses of the natural resources and scenic quality of the shoreline area is shown
12 in Exhibit PSD-DG-5. This photograph shows the view from the state-owned Fort Hunt
13 Rail Trail (“Trail”) located on the Connecticut River shoreline in Hinsdale, New
14 Hampshire directly opposite the VY Station. This former railroad bed was purchased by
15 the State of New Hampshire in the 1990s and is used for hiking, biking, and running, as
16 well as quiet contemplation of the natural and riverfront setting, by residents of and
17 visitors to Vermont and New Hampshire. The Trail is a scenic pathway that follows the
18 shoreline of the Connecticut River for 9 miles and crosses the River into Brattleboro,
19 Vermont, linking the towns of Northfield, Massachusetts, Hinsdale, New Hampshire, and
20 Brattleboro via this popular recreational resource. The Trail is a level pathway that
21 follows the river shoreline with vegetation on both sides of the trail framing a pastoral,
22 natural setting. The photo taken from the Trail shows the VY Station is highly visible in

1 its entirety from several locations along the Trail and would be visible even in the
2 summer months when deciduous vegetation is in leaf. The Trail is a recent public
3 recreational and scenic resource that was established after the VY Station had been in
4 operation for many years, demonstrating that historical operation of the VY Station is not
5 a suitable justification for concluding there will be “no impacts” to recreational and
6 scenic resources and land uses that have evolved since the VY Station was constructed
7 and will continue to evolve in the future.

8 The Natural Resources Map of the Town of Vernon, dated July 2012 and attached
9 hereto as Exhibit PSD-DG-6, also indicates the inherent incompatibility of the VY
10 Station with its natural surroundings at the riverfront. The map shows the locations of
11 recorded “Significant Natural Communities” and occurrences of “Natural Heritage”
12 plants or animals, as determined by the Vermont Agency of Natural Resources’ Fish and
13 Wildlife Department in its 2007 “Nongame and Natural Heritage Program’s Rare,
14 Threatened and Endangered Species, and Significant Natural Communities” database.
15 According to this state database, a concentration of Natural Heritage plants or animals
16 and two Significant Natural Communities clusters were identified along the river on the
17 northeast side of Governor Hunt Road in the vicinity of the VY Station. Many more
18 listed and protected species were identified in the general area of the VY Station. While
19 it is true that these species are present together with the VY Station, the VY Station’s
20 extended operation for an additional twenty years beyond its license term would not be
21 compatible with nor supportive of the expansion of these natural plant and animal
22 communities along this otherwise prime shoreline habitat.

1 Q15. What is the second reason you disagree with Mr. Dodson's conclusion that operation of
2 the VY Station for an additional twenty years would not have an adverse or undue impact
3 on the scenic or natural beauty of the area, on land use, or on aesthetics?

4 A15. I disagree with Mr. Dodson's analysis of the impacts of the VY Station relative to the
5 standards and objectives of the Vernon Town Plan and the Windham Regional Plan as
6 stated in responses A25 and A27 in his prefiled testimony. In response to the question
7 "whether there are any clear, written community standards intended to preserve the
8 aesthetic and scenic natural beauty of the areas" (Q25), Mr. Dodson summarizes the
9 standards and objectives of the Vernon Town Plan and the Windham Regional Plan and
10 concludes that the VY Station has "no adverse impacts" and that its operations are
11 "consistent with any of these policies" based on his claim that the VY Station is not fully
12 visible from town offices or historic sites. While views of the VY Station may be limited
13 from the particular locations listed by Mr. Dodson, its physical presence along the
14 riverfront is clearly marked by the tall stack that is visible from many areas in the
15 viewshed maps that Mr. Dodson provided with his testimony.³ As shown on the two
16 visual analysis figures presented with Mr. Dodson's testimony, one figure showing the
17 visibility of the reactor complex and the other the visibility of the stack, both features of
18 the VY Station are highly visible from the immediate vicinity of the plant out to a
19 distance of over 5 miles. The stack is a widely visible landmark that locates the VY
20 Station as a prominent heavy industrial complex situated along a scenic section of the

³ See Exhibit EN-HLD-3.

1 Connecticut River shoreline opposite an actively used recreational trail in Hinsdale, New
2 Hampshire.

3 Mr. Dodson also concludes that the VY Station conforms to the Vernon Town
4 Plan and its stated objectives because there is no new development that is proposed on
5 the site as part of Entergy's request to obtain a certificate of public good to operate the
6 VY Station for twenty years beyond its license term. I disagree. Even if one accepts that
7 the VY Station is not visible from some public and sensitive receptor locations, the VY
8 Station's existing large-scale footprint and heavy industrial character still imposes an
9 adverse scenic and aesthetic effect on the riverfront and surrounding low-density
10 residential, rural and agricultural land uses in the immediate vicinity of the Station, and
11 would be an adverse factor in attracting suitable development to a Village Center, as I
12 have described above.

13
14 Q16. In your opinion, would operation of the VY Station for twenty years beyond its original
15 license term have an undue adverse effect on scenic or natural beauty of the area, land
16 use, and aesthetics?

17 A16. Yes, for the reasons described above.

18
19 Q17. Are there potential alternative uses of the VY Station site following decommissioning
20 that would not present such negative impacts?

21 A17. Yes. The VY Station site could be used for expanded recreational opportunities and
22 scenic locations with vistas along the Connecticut River. As stated in the Windham

1 Regional Plan and the Connecticut River Scenic Byway Study, public access to boat
2 launch facilities and associated park uses and scenic pull-offs along the River are lacking
3 in the Route 142 byway corridor in Vernon. The single boat launch south of the Vernon
4 Dam is not sufficient to meet public demand, nor does it offer much in the way of public
5 recreational facilities, vistas of the river, or other public outdoor amenities. A public boat
6 launch with picnic facilities, a scenic lookout, and other amenities north of the dam, on or
7 near the current VY Station site, would be a desirable attraction in Vernon. While such a
8 facility would require approval from the owner of the VY Station, similar public facilities
9 and amenities have been established at other operating and decommissioned power
10 plants, such as the San Onofre Nuclear Power Plant in California that shares a beachfront
11 location with public access to the beach.

12
13 Q18. Does this conclude your testimony?

14 A18. Yes it does, at this time.